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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,110	11/24/2003	Chad A. Cobbley	2269-3437.9US (97-0514.09)	6106
24247	7590	09/07/2004	EXAMINER KOBERT, RUSSELL MARC	
TRASK BRITT P.O. BOX 2550 SALT LAKE CITY, UT 84110			ART UNIT 2829	PAPER NUMBER

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/721,110	COBBLEY ET AL.	
	Examiner	Art Unit	
	Russell M Kobert	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 3-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,13 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1103, 0304 & 0604</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2829

1. Applicant's election without traverse of Species (a), claims 1, 2 and 13-18 in the reply filed on July 28, 2004 is acknowledged.

2. Claims 3-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 28, 2004.

3. Claims 14 and 15 are objected to as being dependent on non-existing claims 23 and 24 and thus have not been considered.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 13, 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Hembree et al (5424652).

Hembree et al anticipates a method for electrically testing a flip-chip semiconductor assembly formed from at least one integrated circuit (IC) die (24) and a substrate (14), the method comprising:

Contacting the substrate with probes (26);

While the substrate is in contact with the probes, bringing the at least one die and the substrate together (via metal clips 34) in conductive contact to form the flip-chip semiconductor assembly; and

Before the at least one die is sealed, electrically testing the assembly using the probes (col 5, ln 19-47); as recited in claim 1.

As to claim 2, having a die-attach station is anticipated by Hembree et al (all of Figure 1 is considered a die-attach station).

As to claim 13, having the bond pads on a surface of the die in a curable conductive contact with conductive pads on the surface of the substrate is considered inherent to Hembree et al.

As to claim 16, the act of bringing the at least one IC die and the substrate together comprises flip-chip attaching (col 4, ln 65-67; col 5, ln 48-51) the at least one IC die to the substrate is anticipated by Hembree et al.

As to claim 17, reworking the flip-chip semiconductor assembly and retesting the flip-chip semiconductor assembly if the flip-chip semiconductor assembly fails the electrical testing act is anticipated by Hembree et al (Hembree et al discusses "re-work"; see col 1, ln 62-68).

As to claim 18, curing the curable conductive contact if the flip-chip semiconductor assembly passes the electrical testing act is considered inherent to Hembree et al (Hembree et al discusses "packaging" only known good die that can only be accomplished in the alternative to "poor wire bonds, cracked packages and improper die attachments"; see col 5, ln 31-40)

6. A shortened statutory period for response to this action is set to expire three month(s) from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Kobert whose telephone number is (571) 272-1963. The Examiner's Supervisor, Michael J. Tokar, can be reached at (571) 272-1812. For an automated menu of Tech Center 2800 phone numbers call (571) 272-2800.



Russell M. Kobert
Patent Examiner
Group Art Unit 2829
August 27, 2004



Michael Tokar
Supervisory Patent Examiner
Technology Center 2800